



IFW/635/15

PTO/SB/17 (12-04v2)

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<b>Effective on 12/08/2004.</b> <b>Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).</b>		<b>Complete if Known</b>	
<b>FEES TRANSMITTAL</b> <b>For FY 2005</b>		Application Number	10/055797 ..
		Filing Date	January 22, 2002
		First Named Inventor	Gregory J. Hannon
		Examiner Name	Chong, K.
		Art Unit	1635
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		TOTAL AMOUNT OF PAYMENT (\$ 180.00)	
		Attorney Docket No. CSHL-P03-010	

<b>METHOD OF PAYMENT</b> (check all that apply)					
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<b>FEES CALCULATION</b>							
<b>1. BASIC FILING, SEARCH, AND EXAMINATION FEES</b>							
<b>Application Type</b>	<b>FILING FEES</b>		<b>SEARCH FEES</b>		<b>EXAMINATION FEES</b>		
	<b>Fee (\$)</b>	<b>Small Entity</b>	<b>Fee (\$)</b>	<b>Small Entity</b>	<b>Fee (\$)</b>	<b>Small Entity</b>	<b>Fees Paid (\$)</b>
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____
<b>2. EXCESS CLAIM FEES</b>							
<b>Fee Description</b>							
Each claim over 20 (including Reissues) <b>Small Entity</b> <b>Fee (\$)</b> <b>Fee (\$)</b> 50      25							
Each independent claim over 3 (including Reissues) <b>Fee (\$)</b> <b>Fee (\$)</b> 200      100							
Multiple dependent claims <b>Fee (\$)</b> <b>Fee (\$)</b> 360      180							
<b>Total Claims</b> <b>Extra Claims</b> <b>Fee (\$)</b> <b>Fee Paid (\$)</b> _____ - = _____ x _____ = _____				<b>Multiple Dependent Claims</b> <b>Fee (\$)</b> <b>Fee Paid (\$)</b> _____			
<b>Indep. Claims</b> <b>Extra Claims</b> <b>Fee (\$)</b> <b>Fee Paid (\$)</b> _____ - = _____ x _____ = _____				_____			
<b>3. APPLICATION SIZE FEE</b>							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
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<b>4. OTHER FEE(S)</b>							
Non-English Specification, \$130 fee (no small entity discount)							
Other (e.g., late filing surcharge): <u>1806 Submission of an Information Disclosure Statement</u> <b>Fee (\$)</b> <u>180.00</u>							

<b>SUBMITTED BY</b>			
Signature	<u>Jennifer Holmes</u>		Registration No. (Attorney/Agent) 46,778
Name (Print/Type)	Jennifer Holmes		Telephone (617) 951-7933
		Date August 16, 2005	

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: 8-16-05

Signature: Maura A. Gallagher (Maura A. Gallagher)

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Dated: 8-16-05 Signature Maura A. Gallagher  
(Maura A. Gallagher)

Docket No.: CSHL-P03-010  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Hannon et al.

Application No.: 10/055797

Confirmation No.: 7431

Filed: January 22, 2002

Art Unit: 1635

For: METHODS AND COMPOSITIONS FOR  
RNA INTERFERENCE

Examiner: K. Chong

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Supplemental Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Supplemental Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Supplemental Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Please charge our Deposit Account No. 18-1945 in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 18-1945, under Order No. CSHL-P03-010. A duplicate copy of this paper is enclosed.

Dated: August 16, 2005

Respectfully submitted,

By   
Jennifer Holmes

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Attorneys/Agents For Applicant



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Substitute for form 1449A/B/PTO				Complete if Known	
				Application Number	10/055797
				Filing Date	January 22, 2002
				First Named Inventor	Gregory J. Hannon
				Art Unit	1635
				Examiner Name	Chong, K.
Sheet	1	of	3	Attorney Docket Number	CSHL-P03-010

CA U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)	MM-DD-YYYY		
AA	2005/0164210		07-28-2005	Mittal et al.	

CB FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		
BA	WO 04/029219		04-08-2004	Fridman et al.	
BB	WO 00/44914		08-03-2000	Li et al.	
BC	WO 01/29058		04-26-2001	Mello et al.	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
CA	Ambros V, Dicing Up RNAs, <i>Science</i> 293: 811-813 (2001).				
CB	Bernstein E, et al., The rest is silence, <i>RNA</i> 7(11):1509-21 (2001).				
CC	Bernstein E, et al., Role for a bidentate ribonuclease in the initiation step of RNA interference, <i>Nature</i> 409(6818):363-6 (2001).				
CD	Bernstein E, et al., Dicer is essential for mouse development, <i>Nat Genet.</i> 35(3):215-7 (2003); <i>Epub</i> 2003 Oct 5.				
CE	Carmell MA, et al., The Argonaute family: tentacles that reach into RNAi, developmental control, stem cell maintenance, and tumorigenesis, <i>Genes Dev.</i> 16(21):2733-42 (2002).				
CF	Carmell MA, et al., Germline transmission of RNAi in mice, <i>Nat Struct Biol.</i> 10(2):91-2 (2003).				
CG	Carmell MA, et al., RNase III enzymes and the initiation of gene silencing, <i>Nat Struct Mol Biol.</i> 11(3):214-8 (2004).				
CH	Caudy AA, et al., Fragile X-related protein and VIG associate with the RNA interference machinery, <i>Genes Dev.</i> 16(19):2491-6 (2002).				
CI	Caudy AA, et al., A micrococcal nuclease homologue in RNAi effector complexes, <i>Nature</i> 425(6956):411-4 (2003).				
CJ	Caudy AA, et al., Induction and biochemical purification of RNA-induced silencing complex from <i>Drosophila S2</i> cells, <i>Methods Mol Biol.</i> 265:59-72 (2004).				
CK	Cleary MA, et al., Production of complex nucleic acid libraries using highly parallel in situ oligonucleotide synthesis, <i>Nat Methods.</i> 1(3):241-8 (2004); <i>Epub</i> 2004 Nov 18.				
CL	Denli AM, et al., RNAi: an ever-growing puzzle, <i>Trends Biochem Sci.</i> 28(4):196-201 (2003).				
CM	Denli AM, et al., Processing of primary microRNAs by the Microprocessor complex, <i>Nature.</i> 432(7014):231-5 (2004); <i>Epub</i> 2004 Nov 7.				
CN	Eck SL, et al., Gene-based therapy, <i>Goodman &amp; Gilman's, The Pharmacological Basis of Therapeutics</i> , 9 <sup>th</sup> Edition, 5:77-101 (1996).				
CO	Fraser A., Human Genes Hit the Big Screen, <i>Nature</i> 428: 375-378 (2004).				
CP	Gupta S, et al., Inducible, reversible, and stable RNA interference in mammalian cells, <i>Proc</i>				

Examiner Signature	Date Considered
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Substitute for form 1449A/B/PTO				Complete If Known	
				Application Number	10/055797
				Filing Date	January 22, 2002
				First Named Inventor	Gregory J. Hannon
				Art Unit	1635
				Examiner Name	Chong, K.
Sheet	2	of	3	Attorney Docket Number	CSHL-P03-010

	Natl Acad Sci USA 101(7):1927-32 (2004); Epub 2004 Feb 4.
CQ	Hammond SM, et al., Post-transcriptional gene silencing by double-stranded RNA, Nat Rev Genet. 2(2):110-9 (2001).
CR	Hannon GJ, RNA interference, Nature 418(6894):244-51 (2002).
CS	Hannon GJ, et al., RNA interference by short hairpin RNAs expressed in vertebrate cells, Methods Mol Biol. 257:255-66 (2004).
CT	Hannon GJ, et al., Unlocking the potential of the human genome with RNA interference, Nature. 431(7006):371-8 (2004).
CU	He L, et al., MicroRNAs: small RNAs with a big role in gene regulation, Nat Rev Genet. 5(7):522-31 (2004).
CV	He L, et al., A microRNA polycistron as a potential human oncogene, Nature 435(7043):828-33 (2005).
CW	Hemann MT, et al., An epi-allelic series of p53 hypomorphs created by stable RNAi produces distinct tumor phenotypes in vivo, Nat Genet. 33(3):396-400 (2003); Epub 2003 Feb 3.
CX	Jackson, AL, et al., Expression profiling reveals off-target gene regulation by RNAi, Nature Biotechnology 21(6), 635-638 (June 2003).
CY	Ketting, RF, et al., Dicer functions in RNA interference and in synthesis of small RNA involved in developmental timing in <i>C. elegans</i> , Genes Dev 15, 2654-2659. (Oct 15, 2001).
CZ	Lee, YS, et al., Distinct Roles for Drosophila Dicer-1 and Dicer-2 in the siRNA/miRNA Silencing Pathways, Cell 117, 69-81 (Apr 2, 2004).
CA1	Liu J, et al., Argonaute2 is the catalytic engine of mammalian RNAi, Science 305(5689):1437-41 (2004); Epub 2004 Jul 29.
CB1	Liu J, et al., MicroRNA-dependent localization of targeted mRNAs to mammalian P-bodies, Nat Cell Biol. 7(7):719-23 (2005); Epub 2005 Jun 5.
CC1	Lund E, et al., Nuclear Export of MicroRNA Precursors, Science 303, 95-98 (Jan 2, 2004).
CD1	Marshall E, Gene therapy's growing pains, Science 269:1050-1055 (1995).
CE1	McCaffrey AP, et al., RNA interference in adult mice, Nature 418(6893):38-9 (2002).
CF1	Murchison EP, et al., miRNAs on the move: miRNA biogenesis and the RNAi machinery, Curr Opin Cell Biol. 16(3):223-9 (2004).
CG1	Paddison PJ, et al., RNA interference: the new somatic cell genetics?, Cancer Cell. 2(1):17-23 (2002).
CH1	Paddison PJ, et al., siRNAs and shRNAs: skeleton keys to the human genome, Curr Opin Mol Ther. 5(3):217-24 (2003).
CI1	Paddison PJ, et al., Short hairpin activated gene silencing in mammalian cells, Methods Mol Biol. 265:85-100 (2004).
CJ1	Paddison PJ, et al., A resource for large-scale RNA-interference-based screens in mammals, Nature 428(6981):427-31 (2004).
CK1	Paddison PJ, et al., Stable suppression of gene expression by RNAi in mammalian cells, 99(3):1443-1448 (2002).
CL1	Paddison PJ, et al., Short hairpin RNAs (shRNAs) induce sequence-specific silencing in mammalian cells, Genes & Development 16:948-958 (2002).
CM1	Pham JW, et al., A Dicer-2-Dependent 80S Complex Cleaves Targeted mRNAs during RNAi in Drosophila, Cell 117, 83-94 (Apr 2, 2004).
CN1	Qi Y, et al., Biochemical Specialization within Arabidopsis RNA Silencing Pathways, Mol Cell. 19(3):421-8 (2005).
CO1	Rivas FV, et al., Purified Argonaute2 and an siRNA form recombinant human RISC, Nat Struct Mol Biol. 12(4):340-9 (2005); Epub 2005 Mar 30.
CP1	Schramke V, et al., RNA-interference-directed chromatin modification coupled to RNA polymerase II transcription, Nature 435(7046):1275-9 (2005); Epub 2005 Jun 19.
CQ1	Silva JM, et al., RNA interference: a promising approach to antiviral therapy?, Trends Mol Med. 8(11):505-8 (2002).

Examiner Signature	Date Considered
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	10/055797
Sheet	3	of	3	Filing Date	January 22, 2002
				First Named Inventor	Gregory J. Hannon
				Art Unit	1635
				Examiner Name	Chong, K.
				Attorney Docket Number	CSHL-P03-010

CR1	Silva JM, et al., Free energy lights the path toward more effective RNAi, Nat Genet. 35(4):303-5 (2003).	
CS1	Silva J, et al., RNA-interference-based functional genomics in mammalian cells: reverse genetics coming of age, Oncogene. 23(51):8401-9 (2004).	
CT1	Silva JM, et al., RNA interference microarrays: high-throughput loss-of-function genetics in mammalian cells, Proc Natl Acad Sci USA. 101(17):6548-52 (2004); Epub 2004 Apr 14.	
CU1	Silva JM, et al., Second-generation shRNA libraries to the mouse and human genomes, unpublished manuscript	
CV1	Siolas D, et al., Synthetic shRNAs as potent RNAi triggers, Nat Biotechnol. 23(2):227-31 (2005); Epub 2004 Dec 26.	
CW1	Song JJ, et al., The crystal structure of the Argonaute2 PAZ domain reveals an RNA binding motif in RNAi effector complexes, Nat Struct Biol. 10(12):1026-32 (2003); Epub 2003 Nov 16.	
CX1	Song JJ, et al., Crystal structure of Argonaute and its implications for RISC slicer activity, Science 305(5689):1434-7 (2004); Epub 2004 Jul 29.	
CY1	Svoboda P, et al., RNAi and expression of retrotransposons MuERV-L and IAP in preimplantation mouse embryos; Dev Biol. 269(1):276-85 (2004).	
CZ1	Tabara H, et al., The dsRNA Binding Protein RDE-4 Interacts with RDE-1, DCR-1, and a DExH-Box Helicase to Direct RNAi in C. elegans, Cell 109, 861-871. (Jun 28, 2002).	
CA2	Tomari Y, et al., RISC Assembly Defects in the Drosophila RNAi Mutant armitage, Cell 116, 831-841 (Mar 19, 2004).	
CB2	Zhang H, et al., Human Dicer preferentially cleaves dsRNAs at their termini without a requirement for ATP, The Embo Journal, 21, 5875-5885. (Nov 1, 2002).	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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